

REMARKS

Reconsideration of this application, based on this amendment and these following remarks, is respectfully requested.

Claims 9, 15 through 18, and 20 remain in this case. Claim 9 is amended. Claims 1 through 8, 10 through 14, 19, and 21 through 26 are canceled to advance the prosecution of this case.

Regarding the remaining claims in this case, claim 9 and some of its dependent claims were rejected under §102(e) as anticipated by the Wright et al. reference¹; claim 20 was rejected under §103 as unpatentable over the Wright et al. reference. Claims 12 and 13 were rejected under §103 as unpatentable over the Wright et al. reference in view of the Barlev et al. reference².

Claim 9 is amended to overcome the rejection. Claims 10 through 14, and 19, are canceled accordingly.

Amended claim 9 is now directed to a digital subscriber line communications system that comprises a central office modem, a customer premises equipment modem, and a concentrator. The concentrator is recited as coupled to the central office modem over a communications facility comprising fiber optics, and to the customer premises equipment modem via first and second twisted-wire pairs. In addition, the concentrator now in amended claim 9 is also recited as comprising the elements previously recited in claims 12, 13, and 19, including analog-to-digital converter and digital-to-analog converter circuitry, modulator and demodulator circuitry, a concentrator function, and a central processing unit. The specification also supports this

¹ U.S. Patent Application Publication No. US 2005/0030975 A1, published February 10, 2005, from an application filed by Wright et al. on August 7, 2003.

² U.S. Patent No. 7,133,441 B1, issued November 7, 2006 to Barlev et al., from an application filed February 22, 2000.

concentrator as now recited in amended claim 9.³ As such, no new matter is presented by this amendment.

Claims 10 through 14, and 19, are canceled considering the amendment to claim 9.

Applicant submits that amended claim 9 and its remaining dependent claims are novel and patentably distinct over the prior art of record in this case, including the Wright et al. and Barlev et al. references applied against these claims.

The Wright et al. reference nowhere discloses any concentrator, much less a concentrator as recited in amended claim 9. The Examiner asserted that the Wright et al. reference does in fact disclose such a concentrator,⁴ presumably in connection with the aggregators (106, 112). However, neither these aggregators, nor any other element of the Wright et al. reference, correspond to the concentrator of amended claim 9.

Claim 9 requires that the first and second transceivers in the central office are coupled to the second, fiber optic, communications facility, while the third and fourth transceivers in the customer premises equipment are coupled to the first and second twisted-pair wire communications facility. The concentrator of claim 9 is connected between the first communications facility (the twisted-pairs) and the second communications facility, and therefore is coupled between the first and second transceivers, on one hand, and the third and fourth transceivers, on the other hand. In contrast, the aggregators of the Wright et al. reference are placed on the opposite sides of the “ADSL ATU-C” and “ADSL ATU-R” elements, in both the central office and the customer premises equipment. Nor is there any other element disclosed by the Wright et al. reference that is coupled into the communications system in the manner required of the concentrator of amended claim 9. Accordingly, regardless of the function and construction of the aggregator of the Wright et al. reference, neither it nor any other element taught by that reference can correspond to the concentrator now required by amended claim 9.

Nor does the Barlev et al. reference teach such a concentrator. The Examiner asserted that this reference teaches a concentrator in connection with its Figures 10 and 11, such a

³ Specification of S.N. 10/810,371, as published as U.S. Patent Application Publication No. US 2005/0213648 A1, paragraphs [0059] through [0061]; Figure 6.

⁴ Office Action of April 23, 2007, page 6.

concentrator including analog-to-digital converter circuitry, digital-to-analog converter circuitry, and modulator and demodulator circuitry.⁵ Applicant disagrees. The circuitry of Figure 10 comprises an integral modem module of the High Speed Access System (HSAS) of the disclosed system,⁶ and the circuitry of Figure 11 shows an alternative construction of that HSAS of the disclosed system.⁷ However, as shown in Figure 3 of the Barlev et al. reference, the HSAS of the disclosed system refers to one of a pair of subsystems (130; 146) on either side of a “copper cable plant” (150).⁸ As such, these HSAS subsystems cannot correspond to the concentrator of amended claim 9, which is disclosed as coupled to a central office modem via fiber optics, and to a customer premises equipment modem via first and second twisted-pair wire. Furthermore, the Barlev et al. reference nowhere discloses that its HSAS contains a central processing unit, coupled to a concentrator function, for assigning first and second twisted-wire pairs to a communications service provider associated with the customer serviced by the first and second twisted-wire pairs, as required of the concentrator of amended claim 9. Accordingly, Applicant submits that the Barlev et al. reference does not provide those teachings missing from the Wright et al. reference that are necessary in order to reach the requirements of amended claim 9; no other reference of record also provides such teachings regarding the concentrator of amended claim 9.

Applicant therefore respectfully submits that the combined teachings of the prior art fall short of the requirements of amended claim 9 and its dependent claims. Furthermore, Applicant submits that there is no suggestion or motivation provided by the prior art to modify these teachings in order to reach claim 9, nor would such modification be apparent to one of ordinary skill in the art using ordinary creativity. In addition, the important advantages provided by the system of amended claim 9, in further suppressing crosstalk in the ADSL communications provided by this system,⁹ support a finding that the differences between the claimed system and the prior art are significant and lend patentable weight to the claim.

⁵ Office Action, *supra*, pages 9 and 10.

⁶ Barlev et al., *supra*, column 29, lines 23 through 25.

⁷ Barlev et al., *supra*, column 30, line 66 through column 31, line 1.

⁸ Barlev et al., *supra*, column 14, lines 4 through 7.

⁹ Specification, *supra*, paragraph [0059].

For these reasons, Applicant respectfully submits that amended claim 9 and its dependent claims now in this case are in condition for allowance.

Reconsideration of this application in light of this amendment and these remarks is respectfully requested.

Respectfully submitted,
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